1 VQE results Aer Estimator (With Shots)

(Full Hamiltonian) Anharmonic Oscillator $\Lambda = 4$ COYBLA Max 10k Iterations

Ansatz	Tolerance	Shots	Converged runs	Mean iter	VQE min E.	σ_{min}	Δ_{min}	VQE median E.	Δ_{median}	Exact	Time
RA r1 rl	1e−01	10000	100/100	33	−1.6047e−01	6.9171e−02	4.3173e−03	5.0441e−01	6.692e−01	−1.6479e−01	00h 07m 11s
RA r1 rl	1e−02	10000	100/100	49	−1.0021e−01	6.875e−02	6.4572e−02	5.0114e−01	6.6593e−01	-	00h 12m 07s
RA r1 rl	1e−03	10000	100/100	58	−1.6393e−01	6.9286e−02	8.5172e−04	4.7634e−01	6.4113e−01	-	00h 13m 46s
RA r1 rl	1e−04	10000	100/100	72	−1.5587e−01	6.8467e−02	8.9182e−03	5.2389e−01	6.8868e−01	-	00h 15m 42s
RA r1 rl	1e−05	10000	100/100	82	−1.827e−01	6.7886e−02	−1.791e−02	4.4228e−01	6.0707e−01	-	00h 18m 05s
RA r1 rl	1e−06	10000	100/100	92	−1.4032e−01	7.0191e−02	2.4466e−02	4.927e−01	6.5749e−01	-	00h 20m 13s
RA r1 rl	1e−07	10000	100/100	106	−1.9967e−01	6.8143e−02	−3.4887e−02	3.8285e−01	5.4764e−01	-	00h 24m 07s
RA r1 rl	1e−08	10000	100/100	115	−1.7986e−01	6.9803e−02	−1.5076e−02	4.8429e−01	6.4907e−01	-	00h 23m 23s
Ansatz	Tolerance	Shots	Converged runs	Mean iter	VQE min E.	σ_{min}	Δ_{min}	VQE median E.	Δ_{median}	Exact	Time

Table 1